

## **Summary of Cancer Incidence and Mortality for Zip Code 29681 (Simpsonville, SC)**

### ***Cancer Incidence in Zip Code 29681***

The first step in the analysis of cancer data for zip code 29681 was to look at the number of new cancer cases diagnosed in the zip code and compare this to the number of cancer cases expected (see Table 1). This first step determines if there is anything unusual with cancer patterns in the area. The number of "expected" cancer cases is calculated by using South Carolina cancer rates and applying them to the population of the zip code.

Table 1 shows what types of cancer occurred in zip code 29681 from 1996-2000, and how many cancer cases were expected. Overall, there were fewer cases of cancer than expected. A total of 502 new cases of cancer occurred in the zip code, while 553 cases were expected. The most common types of cancer were prostate, female breast, lung, and colon/rectum cancers. These four types of cancer are also the most common cancers occurring across all of South Carolina.

One type of cancer (**melanoma of the skin**) was significantly elevated. The main risk factor for melanoma is excessive exposure to ultraviolet radiation from sunlight or tanning booths. Also, having certain types of moles makes a person more likely to develop melanoma. Finally, the risk of melanoma is greater if one or more of a person's first-degree relatives have been diagnosed with melanoma<sup>1</sup>.

### ***Cancer Deaths in Zip Code 29681***

To assess cancer deaths in this zip code, cancer mortality data from 1997-2001 were used. The same process used to analyze new cancer cases was also used to analyze cancer deaths. Table 2 shows the number of cancer deaths that occurred and the number expected in the zip code. A total of 201 cancer deaths occurred in this zip code, while 243 deaths were expected. Therefore, fewer cancer deaths occurred than expected. There were no specific types of cancer death with statistically significant elevations.

### ***Conclusions***

To summarize, fewer cancer cases and cancer deaths occurred in zip code 29681 than expected. Melanoma of the skin cases were significantly elevated; however, the risk factors associated with this cancer are lifestyle related (i.e. exposure to UV radiation).

In order for a true cancer cluster to exist, the number of cancers occurring must be more than would be expected by chance. Along with statistical testing, there are several other criteria that determine whether a true cancer cluster exists. First, a cancer cluster would more likely involve rarer types of cancer rather than more common cancers like breast or lung cancers. Also, a cancer cluster would occur with one specific type of cancer rather than having excesses in several different types of cancer. Taking all these criteria into consideration, there is no evidence of cancer clustering or of cancers resulting from environmental exposures in zip code 29681.

For questions about this report, please contact Laura Sanders at the SC Central Cancer Registry.

### ***Report provided by:***

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### ***References***

1. American Cancer Society, 2001. [www.cancer.org](http://www.cancer.org)

Information on cancer incidence provided by the SC Central Cancer Registry, Office of Public Health Statistics and Information Services, SC Dept. of Health and Environmental Control.  
Information on cancer mortality provided by the Division of Vital Records and the Division of Biostatistics, SC Dept. of Health and Environmental Control. 4/2/03

**Table 1. Analysis of New Cancer Cases in Zip Code 29681, 1996-2000**

<u>Site</u>	<u>Observed No. of Cases</u>	<u>Expected No. of Cases</u>	<u>Observed/Expected</u>	<u>Chi-SquareTest*</u>
Prostate	95	86.9	1.09	0.76
Breast (Female)	84	86.6	0.97	0.08
Lung/Bronchus	56	84.2	0.67	9.42
Colon/Rectum	55	60.9	0.90	0.58
<b>Melanoma</b>	<b>39</b>	<b>21.3</b>	<b>1.83</b>	<b>14.68</b>
Bladder	20	20.2	0.99	0.00
Non-Hodgkin's Lymphoma	15	18.2	0.82	0.56
Oral/Pharynx	11	16.9	0.65	2.04
Uterus	10	13.3	0.75	0.84
Leukemia	9	10.8	0.83	0.31
Pancreas	7	11.6	0.60	1.84
Ovary	7	9.4	0.75	0.60
Cervix	7	9.1	0.77	0.50
Larynx	7	7.1	0.99	0.00
Kidney/Renal Pelvis	6	14.4	0.42	4.92
Thyroid	6	6.9	0.87	0.13
Stomach	5	8.3	0.60	1.33
Brain/CNS	4	8.2	0.48	2.19
Esophagus	4	7.7	0.52	1.76
Multiple Myeloma	4	5.9	0.68	0.62
Unknown/III-Defined	9	NA	NA	NA
All Sites	502	552.8	0.91	4.67

Excludes in situ cases of cancer to allow for comparison.

Cancer sites with less than 5 cases of cancer expected are not analyzed due to the unreliability of statistical tests based on small numbers.

\*The Chi-Square statistical test allows us to determine if the difference between what is observed and what is expected is significant. If the value is greater than 3.84, then we are 95% confident that the observed number of cases is significantly different from the expected number of cases.

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**Table 2. Analysis of Cancer Deaths in Zip Code 29681, 1997-2001**

<b><u>Site</u></b>	<b><u>Observed No. of Deaths</u></b>	<b><u>Expected No. of Deaths</u></b>	<b><u>Observed/Expected</u></b>	<b><u>Chi-SquareTest*</u></b>
Lung/Bronchus	63	71.5	0.88	1.02
Colon/Rectum	21	23.6	0.89	0.28
Breast (Female)	14	19.1	0.73	1.35
Prostate	12	14.0	0.86	0.29
Non-Hodgkin's Lymphoma	8	8.7	0.92	0.06
Ovary	8	5.5	1.46	1.14
Pancreas	7	13.0	0.54	2.80
Brain/CNS	5	6.9	0.73	0.52
Multiple Myeloma	5	5.3	0.94	0.02
Leukemia	4	8.4	0.48	2.28
Esophagus	4	6.3	0.64	0.83
Oral/Pharynx	4	5.0	0.80	0.21
Stomach	3	6.2	0.48	1.65
Kidney/Renal Pelvis	3	5.0	0.60	0.81
Unknown/III-Defined	9	NA	NA	NA
All Sites	201	243.0	0.83	7.27

Cancer sites with less than 5 cancer deaths expected are not analyzed due to the unreliability of statistical tests based on small numbers.

\*The Chi-Square statistical test allows us to determine if the difference between what is observed and what is expected is significant. If the value is greater than 3.84, then we are 95% confident that the observed number of deaths is significantly different from the expected number of deaths.

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